

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-37. (cancelled)

38. (currently amended) ~~Fluidising~~ A fluidising apparatus ~~including~~ comprising:

a supply duct (1) for supplying liquid under pressure to a lower portion of a vessel (11) containing a fluidisable material, the supply duct extending into the vessel and including at the outlet end thereof one or more jets (212) for directing the flow of liquid into the vessel substantially transversely to the major axis of the supply duct, and

an outlet duct (12) for removing the fluidised material from the vessel, ~~characterised in that~~ wherein the inlet end of the outlet duct (12) is protected from ingress of non-fluidised material by a flange member (214) located between the jets and the inlet end of outlet duct, the flange member adapted to divert the flow of fluidised material past the underside of the flange member before entering the inlet end of the outlet duct.

39. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the outlet duct (12) surrounds the

outlet end of the supply duct (1) and is substantially co-axial therewith.

40. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the flange member (214) is fitted around a portion (204) of the supply duct that extends into the vessel (11).

41. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the flange member (214) also assists in directing the fluidised material towards the outlet duct (12).

42. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the diameter of the flange member (214) is at least equal to the diameter of an adjacent portion of the outlet duct (208).

43. (currently amended) ~~Apparatus according to Claim 38,~~  
A fluidising apparatus comprising:

a supply duct (1) for supplying liquid under pressure to a lower portion of a vessel (11) containing a fluidisable material, the supply duct extending into the vessel and including at the outlet end thereof one or more jets (212) for directing

the flow of liquid into the vessel substantially transversely to the major axis of the supply duct, and

an outlet duct (12) for removing the fluidised material from the vessel,

wherein the inlet end of the outlet duct (12) is protected from ingress of non-fluidised material by a flange member (214) located between the jets and the inlet end of outlet duct, the flange member adapted to divert the flow of fluidised material past the underside of the flange member before entering the inlet end of the outlet duct, and wherein the flange member (214) includes a groove (215) on its surface that faces the outlet duct (208).

44. (currently amended) ~~Apparatus~~ The apparatus according to Claim 43, wherein the outlet duct (208) projects at least partially into the groove (215).

45. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the distance between the outlet duct (208) and the flange member (214) is adjustable.

46. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the supply duct (1) and/or the outlet duct (12) is substantially cylindrical.

47. (currently amended) ~~Apparatus~~ The apparatus according to Claim 46, wherein the diameter of the outlet duct (208) varies along its length.

48. (currently amended) ~~Apparatus~~ The apparatus according to Claim 47, wherein an upper portion of the outlet duct (208) is narrower than a lower portion.

49. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the fluidiser apparatus is partially housed within a housing (206) extending down from the base of the vessel (11).

50. (currently amended) ~~Apparatus~~ The apparatus according to Claim 49, wherein a space (209) exists between the inner surface of the housing (206) and the outer surface of the outlet duct (208).

51. (currently amended) ~~Apparatus~~ The apparatus according to Claim 46, further including a body portion (202) surrounding the supply duct (204) and substantially blocking the outlet duct (208) apart from an aperture through which the fluidised material can pass.

52. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, further including an aperture or bore (501) acting as a bypass between the supply duct (204) and the outlet duct (208).

53. (currently amended) ~~Apparatus~~ The apparatus according to Claim 52, wherein a valve (502) is fitted to the bypass aperture or bore (501).

54. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the supply duct includes an L-shaped portion (203) and is connected to a substantially horizontal pipe (1) leading to the fluidising apparatus.

55. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the outlet duct includes an L-shaped portion (216) leading to a substantially horizontal pipe (12) leading away from the fluidising apparatus.

56. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the supply duct (204) directs the flow of liquid into the vessel (11) in a plurality of directions substantially radially to the major axis of the supply duct.

57. (currently amended) ~~Apparatus according to Claim 56,~~  
~~therein~~ A fluidising apparatus comprising:

a supply duct (1) for supplying liquid under pressure  
to a lower portion of a vessel (11) containing a fluidisable  
material, the supply duct extending into the vessel and including  
at the outlet end thereof one or more jets (212) for directing  
the flow of liquid into the vessel substantially transversely to  
the major axis of the supply duct, and

an outlet duct (12) for removing the fluidised material  
from the vessel,

wherein the inlet end of the outlet duct (12) is  
protected from ingress of non-fluidised material by a flange  
member (214) located between the jets and the inlet end of outlet  
duct, the flange member adapted to divert the flow of fluidised  
material past the underside of the flange member before entering  
the inlet end of the outlet duct, the supply duct (204) directs  
the flow of liquid into the vessel (11) in a plurality of  
directions substantially radially to the major axis of the supply  
duct, and the outlet end of the supply duct is fitted with a  
plurality of nozzles (212) arranged radially therearound.

58. (currently amended) ~~Apparatus~~ The apparatus  
according to Claim 57, wherein the nozzles are arranged in a  
plurality of vertical tiers.

59. (currently amended) ~~Apparatus~~ The apparatus according to Claim 57, wherein the nozzles produce a fan spray.

60. (currently amended) ~~Apparatus~~ The apparatus according to Claim 56, wherein the outlet end of the supply duct includes a cap (310) having a plurality of radially arranged slots (314).

61. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the supply duct (1) is remote from the outlet duct (12).

62. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein the supply duct (1) is parallel along part of its length with part of the outlet duct (208).

63. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, wherein a portion (204) of the supply duct extends into the vessel (11) through the base of the vessel.

64. (currently amended) ~~Apparatus~~ The apparatus according to Claim 63, wherein the portion (204) extending into the vessel (11) has a length shorter than the diameter of the vessel.

65. (currently amended) ~~Apparatus~~ The apparatus according to Claim 38, further including a hydrocyclone adjacent the outlet duct.

66. (previously presented) A vessel (11) fitted with fluidiser apparatus (10) according to Claim 38.

67. (currently amended) [[A]] The vessel according to Claim 66, wherein the vessel (11) is an open pot.

68. (currently amended) [[A]] The vessel according to Claim 66, wherein the vessel (11) is a closed pot.

69. (currently amended) [[A]] The vessel according to Claim 66, wherein the supply duct (1) is connected directly to the outlet duct (12) via a valve (16).

70. (currently amended) [[A]] The vessel according to Claim 68, wherein the outlet duct (12) passes through a pressure-reducing cyclone (18).

71. (currently amended) [[A]] The vessel according to Claim 66, wherein [[the]] a sensor senses the flow rate at the outlet duct (12) ~~is sensed~~ and a controller controls the flow



rate of the liquid in the supply duct (1) ~~is controlled~~  
accordingly.

72. (previously presented) A method of treating  
fluidisable material in a vessel, the method including steps of:

supplying liquid under pressure to a vessel, the liquid  
being emitted into a lower portion of the vessel as one or more  
jets substantially transverse to the major axis of the supply  
duct, and

removing the fluidised material from the vessel, the  
method characterised in that the inlet end of the outlet duct  
(12) is protected from ingress of non-fluidised material by a  
flange member (214) adapted to divert the flow of fluidised  
material past the underside of the flange member before entering  
the inlet end of the outlet duct.